



**Rules and
Regulations for
the Classification
of Ships, July 2007**

Notice No. 1

Effective Date of Latest
Amendments:

See page 1

Issue date: October 2007

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RULES AND REGULATIONS FOR THE CLASSIFICATION OF SHIPS, *July 2007*

Notice No. 1

This Notice contains amendments within the following Sections of the *Rules and Regulations for the Classification of Ships, July 2007*. The amendments are effective on the dates shown:

Part	Chapter	Section	Effective date
1	2	2	1 August 2007
1	2	3	1 January 2008
1	2	3	Corrigenda
1	3	2	1 August 2007
1	3	18	Corrigendum
3	2	2	Corrigenda
3	4	7	Corrigendum
3	14	10	Corrigendum
4	7	9	Corrigendum
4	9	3, 4, 5, 6, 7, 8, 9, 10	Corrigenda
5	13	12	Corrigendum
6	2	1, 10	Corrigenda
7	4	7	Corrigendum
7	9	1	Corrigendum

It will be noted that the amendments also include corrigenda, which are effective from the date of this Notice.

The *Rules and Regulations for the Classification of Ships, July 2007* are to be read in conjunction with this Notice No. 1. The status of the Rules is now:

Rules for Ships
Notice No. 1

Effective date: July 2007
Effective dates: 1 August 2007, 1 January 2008 &
Corrigenda

Part 1, Chapter 2

Classification Regulations

Effective date 1 August 2007

■ Section 2

Character of classification and class notations

2.3 Class notations (hull)

(Part only shown)

2.3.16 **ShipRight notations.** The following notations are associated with LR's ShipRight procedures and may be assigned in conjunction with the ShipRight notation as considered appropriate by the Committee, on application from the Owners. The requirements pertaining to these notations and the (hull) ShipRight procedures are given in Pt 3, Ch 16.

ShipRight

ACS(B,D) This notation (Anti-Corrosion System) will be assigned when coating specification, application and inspection for water ballast tanks (denoted by B) or/and double-side skin spaces (denoted by D) have been verified according to ShipRight procedures.

ShipRight

SDA This notation (Structural Design Assessment) will be assigned when direct calculations in accordance with the ShipRight procedures have been applied.

2.7 Descriptive notes

(Part only shown)

2.7.3 Where LR's ShipRight procedures for the following have been applied on a voluntary basis, then a descriptive note will, at the Owner's request, be entered in column 6 of the *Register Book*, preceded by the word **ShipRight** (see also Pt 3, Ch 16 and Pt 5, Ch 21):

ES	Enhanced Scantlings
PCWBT(date)	Protection Coatings in Water Ballast Tanks
SEA(Hss-n)	Ship Event Analysis (Hull Surveillance Systems)

Effective date 1 January 2008

■ Section 3

Surveys – General

3.5 Existing ships – Periodical Surveys

3.5.28 At the request of an Owner, the Committee may give special consideration to the application of the periodical survey requirements given in Chapter 3 to military ships or commercial ships owned or chartered by Governments, which are utilised in support of military operation or service.

Part 1, Chapter 3

Periodical Survey Regulations

Effective date 1 August 2007

■ Section 2

Annual Surveys - Hull and machinery requirements

2.2 Annual Surveys

2.2.13 The boilers, other pressure vessels and their appurtenances, including ~~safety devices~~, foundations, controls, ~~relieving gear~~, high pressure and waste steam piping, ~~and~~ insulation and gauges, are to be generally examined. Surveyors should confirm that Periodical Surveys of boilers and other pressure vessels have been carried out as required by the Rules ~~and that the safety devices have been tested.~~

2.2.14 For boilers, the safety devices are to be tested, and the safety valves are to be operated using the relieving devices. For exhaust gas heated economisers/boilers, the safety valves are to be tested at sea by the Chief Engineer and details recorded in the log book.

2.2.15 The operation and maintenance records, repair history and feed water chemistry records of boilers are to be examined.

2.2.16 For other pressure vessels, the safety devices are to be examined.

Existing paragraphs 2.2.14 to 2.2.21 are to be renumbered 2.2.17 to 2.2.24.

(Part only shown)

~~2.2.22~~ 2.2.25 For **oil tankers** (including ore/bulk/oil ships and ore/oil ships), in addition to the applicable requirements of 2.2.1 to ~~2.2.21~~ 2.2.24, the following are to be dealt with where applicable:

(o) Examination of any inert gas system, see ~~2.2.24~~ 2.2.27.

(Part only shown)

~~2.2.23~~ 2.2.26 For **chemical tankers**, in addition to the applicable requirements of 2.2.1 to ~~2.2.22~~ 2.2.25, the following are to be dealt with, where applicable:

Existing paragraph 2.2.24 is to be renumbered 2.2.27.

(Part only shown)

~~2.2.25~~ 2.2.28 For **bulk carriers**, in addition to the applicable requirements of 2.2.1 to ~~2.2.21~~ 2.2.24, the following are to be dealt with, where applicable:

(Part only shown)

~~2.2.26~~ 2.2.29 For **general dry cargo ships**, in addition to the applicable requirements of 2.2.1 to ~~2.2.21~~ 2.2.24, the following are required for ships over 10 years of age:

(Part only shown)

~~2.2.27~~ 2.2.30 For **general dry cargo ships**, in addition to the applicable requirements of 2.2.1 to ~~2.2.21~~ 2.2.24, the following are required for ships over 15 years of age:

Existing paragraphs 2.2.28 to 2.2.33 are to be renumbered 2.2.31 to 2.2.36.

Part 3, Chapter 2

Materials

CORRIGENDA

■ Section 2 Fracture control

2.2 Refrigerated spaces

Table 2.2.3 Grades of steel for minimum design temperatures below 0°C

Minimum design temperature, in °C	Thickness, in mm	Grades of steel
<0 to -10	$t \leq 12,5$ $12,5 < t \leq 25,5$ $t > 25,5$	B/AH D/DH E/EH
<-10 to -25	$t \leq 12,5$ $t > 12,5$	D/DH E/EH
<-25 to -40	$t \leq 12,5$ $t > 12,5$	E/EH FH/LT-FH, see also Pt 2, Ch 3,6 see also Ch 3,6 of the Rules for Materials

Part 3, Chapter 4

Longitudinal Strength

CORRIGENDUM

■ Section 7

Hull buckling strength

7.4 Design stress

7.4.1 Design longitudinal compressive stress, σ_A , is to be determined in accordance with Section 5:

$$\text{minimum } \sigma_A = \frac{30}{k_L} \text{ N/mm}^2 \left(\frac{3,06}{k_L} \text{ kgf/mm}^2 \right)$$

for structural members above the neutral axis,

$$\sigma_A = \sigma_D \frac{z}{z_D}$$

for structural members below the neutral axis,

$$\sigma_A = \sigma_B \frac{z}{z_B}$$

σ_D based on sagging moment and σ_B based on hogging moment are determined in ~~5.6.4~~ 5.8.1.
where

z = vertical distance from the hull transverse neutral axis to the position considered, excluding deck camber, in metres

z_D, z_B = vertical distances from the hull transverse neutral axis to the deck and keel respectively, in metres

For initial design purposes, the hull transverse neutral axis

may be taken at a distance $\frac{D}{2}$ above keel, where D is the

depth of the ship, in metres, as defined in Ch 1,6.

Part 4, Chapter 7

Bulk Carriers

CORRIGENDUM

■ Section 9

Hopper side tank structure

9.3 Sloped bulkhead stiffeners

9.3.1 The scantlings of sloped bulkhead stiffeners are to be as required for inner bottom longitudinals, see Section 8. In ships strengthened for heavy cargoes, the scantlings of the stiffeners are to be derived from Table 7.8.1 using a head for heavy cargo measured vertically from the mid-point of the effective length to the underside of the topside tank sloped bulkhead. Where the hopper tanks are interconnected with the topside tanks, or in way of ballast holds, the scantlings of the stiffeners are also to comply with the requirements of Table 7.8.1(4)(c) and (4)(d), whichever is appropriate. For higher tensile steel longitudinals the requirements of ~~6.2.3~~ Ch 1,6.2.3 are to be complied with where applicable, see also 9.7.1.

Part 4, Chapter 9

Double Hull Oil Tankers

CORRIGENDA

■ Section 3 Longitudinal strength

3.2 Symbols

3.2.1 The symbols used in this Section are defined in ~~4.6~~ 1.5.

■ Section 4 Hull envelope plating

4.2 Symbols

(Part only shown)

4.2.1 The symbols used in this Section are defined as follows:

σ_c = maximum compressive hull vertical bending stress, in N/mm² (kgf/mm²) given by σ_D and σ_B as defined in Pt 3, Ch 4,5.6.1 as appropriate

For ships of normal design, not exceeding 90 m in length, the value of maximum compressive hull vertical bending stress may be determined as follows: at strength deck

$$\sigma_D = 654LB \frac{Z_{min}}{Z_D} \sigma \times 10^{-6} \text{ N/mm}^2 \text{ (kgf/mm}^2\text{)}$$

at keel

$$\sigma_B = 654LB \frac{Z_{min}}{Z_B} \sigma \times 10^{-6} \text{ N/mm}^2 \text{ (kgf/mm}^2\text{)}$$

where Z_{min} , Z_D , Z_B and σ are in accordance with Pt 3, Ch 4,5.

Other symbols are defined in 1.5.

4.2.2 ~~Other symbols are defined in 1.6.~~

■ Section 5 Hull framing

5.2 Symbols

(Part only shown)

5.2.1 The symbols used in this Section are defined as follows:

R_B = bilge radius, in mm, as defined in Table 1.5.2 in Chapter 1.

Other symbols are defined in 1.5.

5.2.2 ~~Other symbols are defined in 1.6.~~

■ Section 6 Inner hull, inner bottom and longitudinal oiltight bulkheads

6.1 General

6.1.1 The inner hull, inner bottom and longitudinal bulkheads are generally to be longitudinally framed. Longitudinal bulkheads may be plane or horizontally corrugated. Centreline longitudinal bulkheads may also be vertically corrugated, see ~~4.3.13~~ 1.4.14. Scantlings of inner hull and longitudinal oiltight bulkheads are to be in accordance with Table 9.6.1 and panel stability is also to be confirmed from primary structure direct calculations. The calculation is to take account of the shear stress and direct stresses derived from both the transverse and longitudinal strength investigations.

6.2 Symbols

(Part only shown)

6.2.1 The symbols used in this Section are defined as follows:

$$R = \sin \theta$$

where θ is the roll angle, in degrees

$$\text{and } \sin \theta = \left(0,45 + 0,1 \frac{L}{B} \right) \left(0,54 - \frac{L}{1270} \right)$$

Other symbols are defined in 1.5.

6.2.2 ~~Other symbols are defined in 1.6.~~

■ Section 7 Transverse oiltight bulkheads

7.1 General

7.2 Symbols

(Part only shown)

7.2.1 The symbols used in this Section are defined as follows:

S_1 = spacing of primary members, in metres. For the span at top, span may be reduced by the depth of deck longitudinal.

Other symbols are defined in 1.5.

7.2.2 ~~Other symbols are defined in 1.6.~~

Part 4, Chapter 9 & Part 5, Chapter 13

■ Section 8 Non-oiltight bulkheads

8.2 Symbols

(Part only shown)

8.2.1 The symbols used in this Section are defined as follows:

$$\alpha = \frac{s}{a}, \text{ but not to be taken greater than } 1,0$$

Other symbols are defined in 1.5.

~~8.2.2 Other symbols are defined in 1.6.~~

■ Section 9 Primary members supporting longitudinal framing

9.2 Symbols

(Part only shown)

9.2.1 The symbols used in this Section are defined as follows:

S_s = span of the vertical web, in metres, and is to be measured between end span points, see Fig. 9.9.1.

Other symbols are defined in 1.5.

~~9.2.2 Other symbols are defined in 1.6.~~

■ Section 10 Construction details and minimum thickness

10.1 Symbols

(Part only shown)

10.1.1 The symbols used in this Section are defined as follows:

I_b = moment of inertia of the end bracket edge stiffeners and associated plating, in cm^4

Other symbols are defined in 1.5.

~~10.1.2 Other symbols are defined in 1.6.~~

Part 5, Chapter 13 Ship Piping Systems

CORRIGENDUM

■ Section 12 Air, overflow and sounding pipes

12.7 Air pipe closing appliances

12.7.1 The closing appliances fitted to tank air pipes in accordance with ~~Pt 3, Ch 12.3.3~~ Pt 3, Ch 4,12.3 are to be of an automatic opening type which will allow the free passage of air or liquid to prevent the tanks being subjected to a pressure or vacuum greater than that for which they are designed.

Part 6, Chapter 2

Electrical Engineering

CORRIGENDA

■ Section 1 General requirements

1.12 Bonding for the control of static electricity

1.12.2 Where bonding straps are required for the control of static electricity, they are to be robust, that is, having a cross-sectional area of about 10 mm², and are to comply with 1.11.6 and ~~1.11.8~~ 1.11.10.

■ Section 10 Electric cables and busbar trunking systems (busways)

10.8 Installation of electric cables

10.8.8 Where electric cables are installed in bunches, provision is to be made to limit the propagation of fire. This requirement is considered satisfied when cables of the bunch have been tested in accordance with the requirements of IEC 60332: *Tests on electric cables under fire conditions, Part 3-22, Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A*, and are installed in the same configuration(s) as are used for the test(s). If the cables are not so installed, information is to be submitted to satisfactorily demonstrate that suitable measures have been taken to ensure that an equivalent limit of fire propagation will be achieved for the configurations to be used. Particular attention is to be given to cables in:

- atria or equivalent spaces; and
 - vertical runs in trunks and other restricted spaces.
- In addition, cables that comply with the requirements of ~~IEC 60332-3-23~~ IEC 60332-3-22 are also required to meet the requirements of IEC 60332-1-2.

Part 7, Chapter 9

Navigational Arrangements for Periodic One Man Watch

CORRIGENDUM

■ Section 1 General requirements

1.2 Information and plans required to be submitted

(Part only shown)

1.2.1 The following information and plans are to be submitted in triplicate:

- A schedule of the electrical and electronic equipment referred to in 2.2.10 giving details of:
 - equipment description;
 - manufacturer;
 - type and/or model; and
 - ~~Evidence~~ evidence of electromagnetic compatibility

Corrigenda

Section numbering in brackets reflects any Section renumbering necessitated by any of the Notices that update the current version of the Rules for Ships.

Part 1, Chapter 2

- 3.5.14 Reference to Ch 3,2.2.19 *now reads*
Ch 3,2.2.22.
Reference to Ch 3,2.2.20 *now reads*
Ch 3,2.2.23.
Reference to Ch 3,2.2.24 *now reads*
Ch 3,2.2.27.
- 3.5.24 Reference to Ch 3,2.2.22 *now reads*
Ch 3,2.2.25.
- 3.5.25 Reference to Ch 3,2.2.16 *now reads*
Ch 3,2.2.19.

Part 1, Chapter 3

- 18.1.1 Reference to 2.2.22 *now reads* 2.2.25.

Part 3, Chapter 14

- 10.2.1 Reference to Pt 1, Ch 3,2.2.28 *now reads*
Pt 1, Ch 3,2.2.31.

Part 7, Chapter 4

- 7.1.5 Reference to Pt 1, Ch 3,2.2.15 *now reads*
Pt 1, Ch 3,2.2.18.

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